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EXAMINER

PHAN, HUY Q

ART UNIT

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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/563,953 | Applicant(s) SINIVAARA ET AL. | |
| | Examiner HUY PHAN | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,7,9,13-16,18,19,22-24 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15,16,18,19 and 31-34 is/are allowed.
- 6) ☒ Claim(s) 1,4,6,7, 9,13,14 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Amendment filed on date: 04/26/2010.
Claims 1, 4, 6, 7, 9, 13-16, 18, 19, 22-24, 31-34 are still pending.
Claims 2, 3, 5, 8, 10-12, 17, 20, 21, 25-30 and 35-37 have been cancelled.

Response to Arguments

2. I) Applicant has cancelled claims 35 and 36, the 112 rejection is withdrawn.
II) Applicant has cancelled claims 35 and 36, the 101 rejection is withdrawn
III) Applicant's arguments with regarding claim rejections – 35 USC 103 (see REMARKS pages 7-8), have been fully considered but they are not persuasive.

Applicant argued that “None of the cited passages teach or suggest that an identifier list is included in a beacon frame or transmitted” (see REMARKS page 8). The examiner respectfully disagrees with applicant’s argument. Zhong discloses an identifier of a wireless terminal (“the STA 100 adds to the list, if it is not already in the list, a STA from which it receives a data or management frame with the "More Data" bit set to 1” see [0045]) being received from a beacon frame (“each STA 100 keeps a list of source STA identifiers from which it expects to receive packets during a given Beacon Interval 300” see [0045]). Thus, Zhong discloses that an identifier list is included in a beacon frame or transmitted.

In response to applicant's arguments against the references individually (e.g., Zhong does not teach or suggest that this list is broadcasted, much less broadcasted in

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a beacon frame (see REMARKS page 8), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, the cited reference Fischer is used to reject the claimed feature of broadcasting the beacon frame (“all of those parameters are broadcast in beacon frames that are sent at a regular interval” see [0036] and/or “In an IBSS, the wireless terminals of the IBSS share beaconing duties” see [0037]). The cited reference Zhong is used to reject the claimed feature the frame containing an identifier list including identifiers of wireless terminals belonging to the ad-hoc network, the identifiers including of a second wireless terminal different from the first wireless terminal (“the STA 100 adds to the list, if it is not already in the list, a STA from which it receives a data or management frame with the "More Data" bit set to 1” see [0045] and/or (“each STA 100 keeps a list of source STA identifiers from which it expects to receive packets during a given Beacon Interval 300” see [0045]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

I) Claims 1, 6, 9, 13, 14, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer (US 2004/0246932; previously cited) in view of Zhong (US 2006/0193296).

Regarding claim 1, Fischer discloses a method comprising:

establishing ("In an IBSS, the wireless terminals of the IBSS share beaconing duties" see [0037]), by a first wireless terminal ("wireless terminal that operates according to FIG. 5A receives beacons and may transmit beacons" see [0045 and fig. 5A), a beacon interval ("all of those parameters are broadcast in beacon frames that are sent at a regular interval" see [0036]) for an ad-hoc network ("An IBSS is usually an ad-hoc network" see [0037] and [0045]) and

broadcasting ("all of those parameters are broadcast in beacon frames that are sent at a regular interval" see [0036]) beacon frames from the first wireless terminal at the beacon intervals ("In an IBSS, the wireless terminals of the IBSS share beaconing duties" see [0037]).

But, Fischer does not particularly show wherein one or more of the beacon frames comprises an identifier list including identifiers of wireless terminals belonging to the ad-hoc network, the identifiers including of a second wireless terminal different from the first wireless terminal. However in analogous art, Zhong teaches wherein one or more of the beacon frames comprises an identifier list including identifiers of wireless terminals ("the list consists of identifiers of STAs" see [0045] and figs. 4-8) belonging to the ad-hoc network ("independent BSS or IBSS WLAN" see [0027] and fig. 1B), the identifiers including of a second wireless terminal (figs. 4-8, STA2) different from the first

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wireless terminal (figs. 4-8, STA1). Since, Fischer and Zhong are related to the ad-hoc wireless network; and/or more specifically they both are concerned with transmitting the beacon signal; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fischer as taught by Zhong for purpose of providing the STAs beaconing information to other STAs associating with the particular IBSS such identifiers of wireless terminals belonging to the ad-hoc network; thus making the process of broadcasting much faster and saving the power consumption of the STA as the known beaconing information being provided.

Regarding claim 6, Zhong discloses the method according to claim 1, further comprising receiving by the first wireless terminal, an identifier of a third wireless terminal when the third wireless terminal joins the ad-hoc network (see figs. 10-12).

Regarding claim 9, Zhong discloses the further comprising organizing the identifiers of the wireless terminals in a priority order, in which the terminals act as the beacon broadcaster (see figs. 10-12).

Regarding claim 13, Fischer discloses the method according to claim 1, wherein the identifier list further includes media access control addresses of the wireless terminals belonging to the ad-hoc network ("MAC address" see [0037]).

Regarding claim 14, Fischer discloses the method according to claim 1, further

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comprising inserting power state information in the identifier list, the power state information indicating whether a wireless terminal included in the list is in a power save state (“idle state” see [0039] and “idle operation” see [0043]).

Regarding claim 22, Fischer discloses an apparatus (fig. 7) comprising:

a transmitter configured to broadcast beacon frames at beacon intervals in an ad-hoc network (“all of those parameters are broadcast in beacon frames that are sent at a regular interval” see [0036]).

But, Fischer does not particularly show wherein transmitter is configured to insert an identifier list in at least some of the beacon frames, the identifier list including identifiers of wireless terminals belonging to the ad-hoc network, wherein the identifiers include an identifier of a wireless terminal different from the apparatus. However in analogous art, Zhong teaches wherein transmitter is configured to insert an identifier list in at least some of the beacon frames (“the list consists of identifiers of STAs” see [0045] and figs. 4-8), the identifier list (“the list consists of identifiers of STAs” see [0045] and figs. 4-8) including identifiers of wireless terminals belonging to the ad-hoc network (“independent BSS or IBSS WLAN” see [0027] and fig. 1B), wherein the identifiers include an identifier of a wireless terminal (figs. 4-8, STA2) different from the apparatus (figs. 4-8, STA1). Since, Fischer and Zhong are related to the ad-hoc wireless network; and/or more specifically they both are concerned with transmitting the beacon signal; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fischer as taught by Zhong for purpose of

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providing the STAs beaconing information to other STAs associating with the particular IBSS such identifiers of wireless terminals belonging to the ad-hoc network; thus making the process of broadcasting much faster and saving the power consumption of the STA as the known beaconing information being provided.

Regarding claim 23, Fischer discloses the apparatus according to claim 22, further comprising a processor configured to establish one or more of the beacon intervals for the ad-hoc network (“all of those parameters are broadcast in beacon frames that are sent at a regular interval” see [0036]).

II) Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer in view of Zhong and further in view of Runick (US 2002/0131371; previously cited).

Regarding claim 7, Fischer and Zhong disclose the method according to claim 1, except receiving by the first wireless terminal at least one traffic announcement message, the at least one traffic announcement message identifying at least one wireless terminal for which another wireless terminal has data to be delivered. However in analogous art, Runick teaches receiving by the first wireless terminal at least one traffic announcement message (“The ATIM is sent during the ATIM window, which occurs immediately following Beacon transmission” see [0023]), the at least one traffic announcement message identifying at least one wireless terminal for which another wireless terminal has data to be delivered (“block data transfer” see [0025]). Since,

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Fischer, Zhong and Runick are related to Ad-hoc wireless network; and/or more specifically they both are concerned with transmitting the beacon signal; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fischer and Zhong as taught by Runick in order to save the power consumption of the STA as “The ATIM is sent during the ATIM window, which occurs immediately following Beacon transmission”.

Regarding claim 24, Fischer and Zhong disclose the apparatus according to claim 22, except further comprising processor configured to receive and handle at least one traffic announcement message identifying at least one wireless terminal for which data is to be delivered in the ad-hoc network, the processor being configured to compile, based on the at least one traffic announcement message, a traffic indication data element, and to insert the traffic indication data element into a selected subsequent beacon frame. However in analogous art, Runick teaches processor to receive and handle at least one traffic announcement message (“The ATIM is sent during the ATIM window, which occurs immediately following Beacon transmission” see [0023]) identifying at least one wireless terminal for which data is to be delivered in the ad-hoc network (“block data transfer” see [0025]), the processor being configured to compile, based on the at least one traffic announcement message, a traffic indication data element (fig. 1 and [0030]), and to insert the traffic indication data element into a selected subsequent beacon frame (fig. 1 and [0030]). Since, Fischer, Zhong and Runick are related to Ad-hoc wireless network; and/or more specifically they both are

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concerned with transmitting the beacon signal; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fischer and Zhong as taught by Runick in order to save the power consumption of the STA as "The ATIM is sent during the ATIM window, which occurs immediately following Beacon transmission".

Reasons for Allowance

4. Claims 15, 16, 18, 19 and 31-34 are allowed.

The following is a statement of reason for the indication of allowance:

Claims 15, 16, 18, 19 and 31-34 are allowed with the same reasons set forth in the Office Action mailed 12/31/2008 (pages 10-11).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Dooley claims that "one portable device is arranged to broadcast an inquiry message according to a first communications protocol, wherein said first beacon device is arranged to detect such an inquiry message and transmit a reply making available to

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one of said second beacon and said portable device an address or identifier for the other, and wherein said second beacon and portable device are configured to perform a service interaction when triggered by the making available of said address or identifier, wherein the second beacon device maintains and periodically updates a list of identifiers for portable devices with which a service interaction is being performed” (see specification).

b) Iwami claims that “neighboring-station managing means for managing a neighboring station in accordance with a beacon reception timing from another communication station, a neighboring-station list in which a beacon reception timing information from a neighboring communication station that can be placed in the predetermined frame period is described and a save list of a neighboring station having beacon reception timing information that cannot be placed in the predetermined frame period, the beacon reception timing information from the neighboring communication station in the save list overlapping with the beacon reception timing information of the neighboring communication station in the neighboring-station list, wherein the neighboring-station managing means issues a request to change a beacon transmission timing, when a beacon signal from another communication station that overlaps beacon reception timing in the neighboring-station list of the wireless communication apparatus is identified and said another communication station that receives the request finds an open time in the predetermined frame period and sets the beacon transmission timing of said another communication station” (see claim 21).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY PHAN whose telephone number is (571)272-79247924. The examiner can normally be reached on 9AM-730PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-76037603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/Huy Q Phan/

Primary Examiner, Art Unit 2617

Date: 06/01/2010